

Power Plants of the BSZEM (Budapest Székesfővárosi Elektromos Művek)

Kelenföld
Revesz ucca, Budapest
Csaki ucca, Budapest

Power Plant of Matravideki Eromu

Lőrinc

Coal Consumption of Caloric Power Plants

2. During the first year of the three-year plan, from 1 August 1947 to 31 July 1948, the caloric power plants of Hungary consumed 1,850,000 tons of coal, and it was estimated that this would increase to 2,250,000 tons, approximately 21 percent, during 1949 because of the greater use of electric power by industry. Rural electrification projects are reported to be relatively insignificant in increasing the overall consumption of power. It is planned that the smaller plants will consume approximately 10 percent of the coal allotted to caloric power plants during 1949. The new power plant at Lőrinc, which is scheduled to begin production in August 1949, will use 35,000 tons during the latter part of the year. The remainder of the coal allotted to power plants is to be distributed at a monthly rate of 166,650 tons among the following plants:

Tata	23,000 tons
Dorog	7,500
Zagyva-Rona	11,000
Kömlő	4,500
Máza Szászvár	3,000
Várpalota	5,000
Brennberg	1,000
Egercsehi	500
Barcika	7,000
Bánhida	32,000
Ajka	25,000
Győr I	1,500
Győr II	1,500
Phöbus-Ujpest	5,000
Szeged	1,500
Nyiregyháza	1,500
Kis Kun Halas	50
Orosháza	1,000
Kelenföld, including the two plants on Revesz and Csaki ucca, Budapest	35,000

Total 166,650 tons

3. The Power Plant of Tata at Tataanya uses an average of 920 tons of coal daily, 90 percent of which is slate coal with caloric value of 3,300 to 3,850, and 10 percent is pea coal, caloric value 5,000.* The plant could use lower grade coals with a minimum caloric value of 3,000. Coal is transported from the sorting station at the Tata mines directly to the power plant by a system of rubber belt conveyors and cable cars. The plant burns an average of 1.25 kilograms of coal for every kilowatt of electricity produced and supplies the Tata coal mines, aluminum, cement, and carbide factories in the area, a bricket plant, and a coal ahydration plant.** The Tata plant is capable of supplying some power to the city of Budapest through connections with the power net of the BSZEM (Budapest Székesfővárosi Elektromos Művek) and with the power plant at Bánhida. Through the power lines of the Pannonia Villamossági r.t., it can also supply an unknown amount of power to the Fejer and Veszprem districts. A temporary line connecting the Tata and Dorog plants through the Látatlan power plant was installed during the second world war, but was replaced in 1948 by a permanent 60 kilovolt line which will enable the two plants to complement one another during power shortages.
4. The Power Plant at Dorog uses an average of 300 tons of coal daily, 30 percent of which is slate coal from the Dorog or Tokód mines with a caloric value of 2,800 to 3,300 and 70 percent of which is powder coal from the Dorog mine with a caloric value of 4,400. The powder coal comes directly from the mine by rubber belt conveyors. Two modern build

rubber belt conveyors. Two modern boilers were installed during the last war and are capable of using powder coal with a minimum caloric value of 2,700 but the older equipment is obsolete and can use only coal with a caloric value of from 4,500 to 5,000. The plant supplies power to coal and carbide mines in the area, a coal ahydration plant, and to local consumers in Dorog, Esztergom, and Szob. Power lines connect it with plants at Komarom and Tata. Through Komarom power can be supplied to the Hungarian Viscose Factory at Nyergesújfalu and to the Győr I plant. During the war, current was also supplied to the Vacuum Oil Refinery at Almásfüzitő and the MAORT refinery at Új-Szöny. The power plant at Látatlan is unprofitable to operate and is kept as a reserve for the Dorog plant. The transformer stations at Dorog, Esztergom, Almásfüzitő and Komarom are connected with the Dorog plant.

5. The Zagyva-Rona Power Plant uses a daily average of 440 tons of coal, part of which is pea coal from the Sálgótarján and Zagyva-Rona mines and part is slate and powder coal from the Kistárenye mines with a caloric value of 2,800 to 3,400. The plant can use all coals of lower grades and is supplied by rail and truck. 1.8 kilograms of coal are burned for each kilowatt output. Two modern boilers using powder coal, built in 1938 and destroyed by the retreating Germans in 1944, were repaired and put back into operation during the summer of 1948. The plant supplies local coal mines, a glass factory, a ferrosilicon plant, and the Rimamurány-Salgó-Tarjáni Vasmű Részvénytársaság. A 100 kilovolt line connects it with Sálgótarján, Hatvan, Szolnok, and the new power plant at Lőrinc. Two small power plants connected with the Rima iron works and the Selypi Cukorgyár r.t. act as reserves for the Zagyva-Rona power plant.
- and 6. The Power Plant at Kőmlő uses an average of 180 tons of coal daily, 33 percent of which is slate coal with a caloric value of 3,600 to 4,000 and 67 percent of which is powder coal with a caloric value of 5,500 shipped by rail from the Kőmlő mines. The plant uses only coal with a high caloric value and consumes 1.1 kilograms of coal per kilowatt of electricity produced. Power lines connect Kőmlő with the plant at Máza-Szászvár. According to the five-year plan, the Kőmlő power plant is to be considerably expanded in coordination with the wider development of local coal mines and plans for the erection of a smelting plant in the area.
7. The Power Plant at Máza-Szászvár consumes an average of 120 tons of coal per day, 30 percent is slate coal with a caloric value of 3,400 to 3,500 from mines at Mánjok and Szászvár, and 70 percent is pea coal with a caloric value of 3,600 from the Mánjok and Máza mines. The equipment is obsolete and 1.6 kilograms of coal are consumed for each kilowatt of power produced. The plant is connected with the power plant at Kőmlő.
8. The Power Plant at Várpalota uses an average of 200 tons of coal daily, 35 percent of which is refined powder coal with a caloric value of 4,000 and 65 percent of which is raw lignite pea coal with a caloric value of 2,100. Approximately 30 percent of the coal allotted, the Várpalota plant is used in producing steam for a coal ahydration plant. The Várpalota power plant is connected with the power plants at Füző and Pént and with the power lines of the Pannónia Villamossági r.t. The plant can use all varieties of small grained lignite. The ahydrated powder coal used comes from a nearby ahydration plant and the raw lignite comes directly from the Várpalota mines.
9. The Power Plant at Brennberg consumes 40 tons of coal daily, 80 percent of which is powder coal, and 20 percent is nut coal with a caloric value of 5,300 to 5,400 obtained from the Brennberg mines. The equipment of the plant is obsolete and production is to be terminated in the near future. At present, only the coal mines in the immediate vicinity are supplied with power from the Brennberg plant.
10. The Power Plant at Egercsehi is operated sporadically to supplement the power plant connected with the cement factory at Bélápátfalva which is the main source of supply for the Egercsehi mines. Egercsehi uses an average of 20 tons of coal per day with a caloric value of 3,900 to 4,000.
11. The Power Plant at Barcika uses an average of 240 tons of sifted pea coal per day from the Borsód mines. The caloric value of the coal used during the winter months when the demand for power is unusually high is 3,400 to 3,600. During the remainder of the year the plant uses all varieties of Borsód coal with caloric values ranging from 2,300 to 3,800. Coal reaches the plant by rail. Barcika power is supplied

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rail. Barcika power is supplied to the coal mines of Borsód and to local consumers in the Borsód, Eger, and Gyöngyös areas. Connecting power lines through Miskolc link Barcika with the power plant at Diósgyőr.

12. The Hydro-electric Plant at Sajo-Kesznyéten is a small plant which delivers its entire power to Diósgyőr.
13. The Power Plant at Bánhida is one of the most important in Hungary and consumes an average of 1,344 tons per day of 0-30 mm blended coal with a caloric value of 4,150. The blend consists of 74 percent slate coal with a caloric value of 3,850 and 26 percent pea coal with a caloric value of 5,000, all of which is obtained from the Tata mines. A deviation of 200 calories in the grade of coal used is possible without noticeable effect in efficiency, but during tests in 1948 it was discovered that exclusive use of unblended slate coal requires a 10 percent increase in tonnage volume which cannot be supported by the cable car system running between the Tata mines and the Bánhida power plant. Although there are railroad sidings near the plant, there are no facilities for unloading coal shipped by rail and the plant is dependent upon the continuous operation of the cable car system which has a top maximum daily capacity of 1,700 tons. The cable cars pick up coal from the coal-sorting station at Felsőgalla and empty it into a receiving bin with a capacity of 8,000 tons at Bánhida. On the return trip the cars carry slag which is emptied along the route. The plant uses 1.1 kilograms of coal per kilowatt of power produced and is equipped with six boilers and three generators. If unblended slate coal is used, corrosion in the La Monte type tubes is doubled and the boilers must be cleaned frequently. The minimum caloric value of coal which can be used in the plant is 3,300 to 3,400. The water supply for the plant is obtained from a nearby dam. The Bánhida plant supplies monthly approximately 7-9,000,000 kilowatts to the Budapest trolley system; 1,000,000 kilowatts to the MAV (Magyar Állam Vasutak-Hungarian National Railroads), repair shop in Budapest, Istvan ut; 4-5,000,000 kilowatts to the Budapest-Hegyeshalom railroad; 8-12,000,000 kilowatts to the Kelenföld power plant, and the remaining 2-4,000,000 kilowatts to Győr and vicinity.
14. The Power Plant at Ajka consumes a daily average of 1,000 tons of powder coal with a caloric value of 3,200 to 3,600 from the Ajka mines. The Ajka mines do not produce sufficient powder coal to supply the plant, however, and larger coal must be ground in the plant by a grinder with a 1,000 ton daily capacity before it can be used. According to source, the continuous operation of this grinder is necessary to keep the plant in production. One kilogram of coal is consumed for each kilowatt of power produced. Coal is shipped over the Ajka-Csingervölgy railroad from the Ajka mines in specially built cars and is emptied into two bunkers with a total capacity of 8,000-10,000 tons. The powder coal is carried by rubber belt conveyors directly from one of these bunkers to the boilers and the larger coal is taken from the other bunker by conveyor to the grinder and thence to the boilers. The plant can use coal of any quality with a minimum caloric value of 2,900. The plant at Ajka is one of the most modern in Hungary and was built during the war with six boilers and three generators, each with a capacity of 16,000 kilowatts. Thus far the plant has operated on only two generators but it was planned to bring the third generator into use by the summer of 1949 in order to feed a new Ajka-Győr 100 kilovolt power line which is still under construction. The construction of the plant during the war was intended primarily to supply power to an unidentified aluminum factory in Ajka. This aluminum factory still consumes the greater part of Ajka's power output and production is to be increased further to meet the needs of new vats being installed. The aluminum factory had an average of 85 vats in operation until August 1948 at which time the number was increased to 112 vats. It is estimated that 135 vats will be in use during 1949.
15. The Győr I Power Plant consumes a daily average of 60 tons of blended Tata and Dorog pea coal and central Pannonia coal. The blend consists of 50 percent Tata-Dorog pea coal with a caloric value of 4,500 to 5,000 and 50 percent central Pannonia coal from Mór and Dúdar with a caloric value of 3,400 to 3,600. The plant uses 1.5 kilograms of coal per kilowatt of power produced and supplies the city of Győr and vicinity. The output of Győr I can be supplemented by the Bánhida power plant if necessary.
16. The Győr II Power Plant consumes a daily average of 60 tons of blended coal, 50 percent of which is Tata or Dorog pea coal with a caloric value of 4,500 to 5,000 or slate coal with a caloric value of 3,600 to 3,850 and 50 percent is 0-30 mm Dúdar and Mór coal with a caloric value of 3,400 to 3,600. 1.2 kilograms of coal are consumed for each kilowatt of power produced. Győr II supplies the MAVAG, railroad car and machine factory, at Győr and, if the power supply is insufficient, can be supplemented by the power plant at Bánhida.

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17. The Phibus-Ujpest Plant consumes an average of 200 tons of blended coal per day consisting of 70 percent Tata and Dorog pea coal with a caloric value of 4,500 to 5,000 and 30 percent Nógrád and Pilisszentiván pea coal with a caloric value of 3,200 to 4,200. Approximately 1.5 kilograms of coal are consumed for every kilowatt of power output. Nógrád coal is the lowest grade which can be used at this plant but does not permit full operating efficiency. During 1945-46 unblended Nógrád coal was used by heating oil or powder coal from Tata had to be injected to aid combustion. Coal supplies are shipped from the mines via the railroad yards of Budapest-Magdolnavaros. The Phibus-Ujpest plant supplies power for the city of Ujpest and its industries, including the Egyesült Izzólámpa és Villamossági r.t., the Leiner glue factory, and the Ujpest-Vae railroad, but additional power must be drawn from the central power plant of Budapest (BSZEM).
18. The Power Plant at Szeged consumes an average of 60 tons of blended coal per day consisting of 80 percent Tata pea coal with a caloric value of 5,000 and 20 percent Nógrád pea coal with a caloric value of 3,200 to 3,800. It consumes 1.6 kilograms of coal per kilowatt of power output. The Szeged plant supplies Szeged and the vicinity, including Hodomezo Vasarhely, The Szeged ~~branch~~ branch system, and flood control stations near Szeged. The output of the plant could be supplemented or partly replaced by that of a small power plant in Hodomezo Vasarhely.
19. The Power Plant of Nyiregyháza consumes an average of 60 tons of Borsód coal per day consisting of 0-20 sized pea coal, 5-20 sized powderless pea coal, or 0-80 and 20-80 "akna" or shaft coal with an overall caloric value of 2,600 to 3,600. The plant uses 2.5 kilograms of coal per kilowatt of power produced and supplies Nyiregyháza and vicinity. A high tension line connects it with the power plant at Debrecen.
20. The Power Plant of Kis Kun Halas is a small plant which uses 50 tons of coal per month consisting of 20-40 or 20-80 Nógrád nut and square coal with a caloric value of 3,400 to 4,000.
21. The Power Plant at Orosháza burns an average of 40 to 45 tons of blended coal per day consisting of 25 to 30 percent Tata pea coal with a caloric value of 5,000 and 70 to 75 percent Nógrád pea coal with a caloric value of 3,200 to 3,800. The plant consumes 2 kilograms of coal per kilowatt of power output and supplies Orosháza and vicinity.
22. The BSZEM Power Plant at Kelenföld-Budapest is the most important in Hungary, according to source, and is the main source of electric power supply for the city of Budapest and the industries concentrated in that area. The power plants at Bánhida and Tata, the new plant at Lörinc, and the smaller plants at Dorog and Phibus-Ujpest could provide additional current in emergencies, but full capacity output of the industries in the Budapest area is dependent upon power from the Kelenföld plant. During the spring and summer months the plant, including the smaller installations on Revesz ucca, consumes 1,350 to 1,400 tons of blended coal per day, consisting of 70 percent Tata and Dorog pea coal with a caloric value of 4,500 to 5,000 and 30 percent Nógrád and Mogyorós pea coal with a caloric value of 3,300 to 3,800. During the winter the proportion of Tata and Dorog coal is increased to 80 percent. The plant consumes 1 kilogram of coal per kilowatt of power output or, if Tata and Dorog coal were used exclusively, 0.9 kilograms of coal per kilowatt would be consumed. The smaller plant on Revesz ucca, which uses the same quality of coal, is operated only during the winter and consumes 3 kilograms of coal per kilowatt of output. The plant on Csaki ucca is insignificant, according to source. Uninterrupted deliveries of coal from Tata and Dorog are essential to the operation of the Kelenföld plant and to most of the other large Hungarian caloric power plants. Coal with a minimum caloric value of 3,500 to 3,700 can be used at Kelenföld but at a considerable sacrifice in efficiency due to divergent points of ignition, height of flame, water and phosphorous contents and quantities of slag. Only 10 to 15 percent of the coal used can have a pitch residue so that Pécs and Kőmlő coal can be used only in limited quantities to replace Tata and Dorog coal. Smaller mines would be unable, for the most part, to supply pea coal because many of them do not have facilities for sorting. Boiler water is taken from wells near the Kelenföld plant and cooling water is obtained from the Danube. A wharf was built on the Danube

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during the autumn of 1947 for barge traffic but handles only 5 percent, or 2,000 to 3,000 tons, of Kelenföld's coal per month because of its limited size. The remaining 95 percent reaches the plant by rail through the Kelenföld yards and is unloaded automatically into the plant's sidings. Slag is removed from the furnaces by a small gauge railroad system. One of the most vulnerable points in the transportation of coal from the Tata and Dorog mines is the railroad bridge at Bia-Torbágy which, if it became impossible to use for any reason, would compel Hungarian railroads to make large detours and increase the shortage in available railroad cars.

23. Lörinc-Matravidék Power Plant

During the early 1930's it became obvious that within a few years existing power plants would be incapable of supplying power to new industries growing up in the Budapest area and that a new, larger plant was necessary. It was decided that this power plant should be designed to use Hungary's large resources of lignite in the Rózsaszentmarton, Gyöngyös, Torony, and Várpalota regions in order to conserve limited coal supplies for other purposes. The choice of a location for the plant fell to the Rózsaszentmarton-Selyeb-Perenye Puszta area between Salgótarján and Hatvan where there are considerable reserves of lignite with a caloric content of 1,500 to 1,900. It was believed that by grinding the lignite and ahydrating pieces more than 20 mm in diameter the caloric content could be increased by 1,800 calories. A grinding and ahydration plant was erected in Perenye Puszta for this purpose. Construction was begun during the war and the plant, with six boilers and three generators, a water supply system, a cable car line carrying ground lignite from the grinding and ahydration plant at Perenye Puszta to the Lörinc plant, and workers quarters, was completed in the summer of 1944. The mines at Rózsaszentmarton were developed at the same time, but the Soviet army dismantled the whole installation in 1945. In 1946 the Hungarian Government decided to re-equip the Lörinc plant and ordered one new generator in Switzerland from the firm Sulzer and Company and two others from Ganz és Társa Villamossági r.t. in Budapest. The planning office had at first requested that the first generator be put into operation in November 1949 but the date was later advanced to August. Power lines to Budapest have already been completed and a temporary line has been erected to Salgótarján carrying power from Kelenföld to an unidentified Ferrosilicon plant and the Zagyva Rona power plant. During the fall of 1948 a new power line was begun which will connect Lörinc with the iron works at Diós Győr and with the power plant at Barcska. According to official estimates, the Lörinc plant will consume 2,000 tons of lignite per day when all three generators are in operation. The development of the lignite mines at Rózsaszentmarton is progressing according to schedule and production is expected to reach 1,300 tons per day by August 1949. The lignite grinding and ahydration plant is in production but has only 100 ton capacity per day at present. The Lörinc power plant is expected to relieve the demand for power in the Budapest area which could only be met during the winter of 1948-49 by full exploitation of all sources regardless of unit cost of output. If for any reason the Lörinc plant cannot be put into operation by the fall of 1949, source believes that private consumers will be strictly rationed to permit maintenance of production in essential industries in the Budapest area.

24. Other Power Plants under AVIRT Administration

There is a small hydro-electric plant at Gábat which is capable of supplying some power to the city of Miskolc and to Diós Győr. A small auxiliary caloric plant is connected with the Ecsed Swamp Reclamation Project, which normally receives power from Uzhorod in Sub-Carpathian Ruthenia. The plant operates for one or two months in each year when Uzhorod power fails, and it consumes approximately 160 tons per month during that period. The power plant at Diós Győr uses all varieties of Boron coal which is shipped partly by rail and partly by truck from Perenye Puszta, but the Barcska and Salgótarján power plants could easily cover any loss in output at Diós Győr. Another small power plant services the city of Pécs. This plant uses lignite which is obtained directly from the coal sorting station at Várpalota and reaches the plant by cable car.

25. Plants not yet under AVIRT Administration

There are a few communal power plants in Hungary which are still under independent administration, but they too are to be nationalized in the near future. They consume a yearly average of approximately 225,000 tons of coal and produce 5 or 6 percent of the total electric power of Hungary. Most of these are small plants

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with obsolete machinery and use the coal sources closest to them; for example the Debrecen plant, one of the largest in this category, uses coal from Nógrád and Borsód; Késkemet uses coal from Tata and Nógrád; Kőszeg uses coal from Várpalota, Sopron, and Brennberg. Another of the larger plants is that of the city of Pécs, but it is now Soviet-controlled. The setup of the Pécs plant is similar to that of Kőmlőd (see paragraph 6 above). During the last war the power plant connected with the Manfred Weiss factory in Csepel drew approximately 1,200,000 kilowatts from Kelenföld in addition to its own output. For efficient operation the Weiss electric plant needs a mixture containing a minimum of 70 percent Tata and Dorog high grade coal, but oil and tar can also be used as fuel.

26. Projected Power Plants

During the war construction was begun on electric power installations in an alum plant at Almásfüzitő, but work was interrupted in 1944 and was not continued until the spring of 1948. The project was scheduled for completion during 1959. The capacity of this power plant is not known, but when the plan was initiated in 1942 there were two alternate plans, one of which called for a yearly consumption of 160,000 tons of Tata and Dorog coal and another which called for a yearly consumption of 240,000 tons. Wartime construction was begun on the basis of the 160,000 ton plan because of coal shortages, but it is not known whether the project was continued on the same basis after the war and there was some discussion that plans should be altered to adapt the plant to the use of Pusztavám coal with a caloric value of 3,600. AVIRT technical experts took issue with the conception of connecting the installations with the alum plant and thought that the construction of a larger plant which could supply power to the whole of Pannonia and provide steam for the alum plant should be substituted. Other than Almásfüzitő, logical sites for a larger power plant would be near the Pusztavám mines or in the vicinity of Kőnyes where a large coal dehydration plant is to be built. According to the five-year plan, an additional power plant is to be built in the Borsód region, possibly near the Sajó River, which can utilize unmarketable powder coal from the Borsód mines with a low caloric value of 1,900 to 2,800. A survey commission visited the Borsód region in December 1948 to investigate the possibilities of constructing this plant.

Miscellaneous

27. Prior to 1 August 1948 the MASZ (Magyar Állami Szénbányák r.t.—Hungarian National Coal Mines) was the central administration for all Hungarian coal mines, but, on that date, its functions were decentralized and allotted to district coal mining administrations. The central distribution of coal for industrial establishments is effected by the "Ipari Szénellátó r.t." (Industrial Coal Supply Company) and for private consumption by TUKERT (Tüzifa Kereskedelmi r.t.—Firewood Commercial Company).
28. In the spring of 1948 AVIRT planned the electrification of between 900 and 1,000 villages in accordance with the five-year plan. The schedule of 200 villages was exceeded by 50 by the end of 1948, and an additional 330 villages are to be completed during 1949. The villages were requested to share 50 percent of the expenses involved in the electrification, either in cash or by furnishing wooden poles, labor, transportation and other services. The remaining 50 percent was advanced to the villages on credit.
29. Two of the most difficult problems faced in AVIRT construction projects have been the procurement of creosoted poles and duraluminum cable. The greater part of Hungary's limited output of poles is allotted to railroads, postal services, and coal mines so that the State Forestry Administration (MALLERD) was able to provide AVIRT with only 2,500 cubic meters during 1948. To cover the rest of its requirements AVIRT imported 4,000 cubic meters of poles from Yugoslavia, 1,100 cubic meters of creosoted poles from Czechoslovakia, and 800 cubic meters of ordinary poles from Austria. The poles of Austrian origin were falsely entered on shipping documents as mining and bridge construction beams. During 1949, 20,000 cubic meters of poles will be needed for village electrification projects and an additional 5-6,000 cubic meters for the maintenance of existing lines. 3,500 cubic meters of MALLERD's total planned production of 7,500 cubic meters of poles during the winter of 1948-49 has been allotted to AVIRT. Yugoslavia has contracted to deliver 11,900 cubic meters of poles at 25 dollars per cubic meter and Czechoslovakia has agreed to provide 2,000 cubic meters of creosoted poles and 5,000 cubic meters of uncreosoted poles during 1949. AVIRT attempted to obtain further supplies from Rumania, Poland, and the Carpatho-Ukraine but the Soviet Union refused to consider the request. No other contracts could be made with Rumania and Poland.

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30. Because of the shortage of creosote and the limited capacities of creosoting plants, the processing of electric poles has presented considerable problems. There are four creosoting plants in Hungary at present; those at Puspokladany and Dombóvár owned by the MAV, one at Tokod owned by Fatelito r.t., and one at Budapest on Soroksari ut owned by Rutgers r.t. The Rutgers plant was destroyed during the war and was brought back into production in August 1948 after repairs costing 170,000 forints. The plant has a capacity of 30 cubic meters per day. AVIRT's specifications call for the use of 60 kilograms of creosote for each cubic meter of wood impregnated, but, because of oil shortages, the greater part of these electric poles have been processed with 30 kilograms of creosote per cubic meter and then with "tanalit acid" solution.*** Hungarian authorities were reluctant to accept this type of impregnation because it had never been tested in Hungary, although it had been in use in Germany and the United Kingdom for a number of years. Creosote is obtained from the Budapest Gas Works, the Pécs Coke Plant, and the coal distilleries of Dorog and Tata.
31. According to source, Hungary has an ample supply of aluminum, and cable manufacturing facilities are adequate so that he was unable to explain the shortage of duraluminum cable. During the first half of 1948 the average production of lead cable in Hungary was 20 to 25 kilometers per month and this was expected to increase to 40 kilometers per month by the second quarter of 1949. Until September 1948 lead cable was produced only by Felten és Guillaume Kábel r.t., Budapest, but since that date the partly reconstructed plant of Magyar-Siemens Művek Villamassági r.t., Budapest, has begun to produce some cable and expects to receive additional machinery in the near future. AVIRT's monthly requirements of lead cable are approximately 2 kilometers; BSZEM needs 9 or 10 kilometers; MASZ 6 kilometers; and NIK*** 3 kilometers of lead cable per month. The remainder of Hungary's production is distributed by a special committee which meets once every three months among other state organizations competing individually for priorities.
32. Záhony on the Hungarian-Ruthenian border was one of the villages electrified by AVIRT and 210 poles were required to complete the work. According to source, eight tracks have been added to the Záhony marshalling yard for transfer of rail shipments to Soviet wide gauge lines.
33. Hungarian power plants have suffered from shortages of transformer oil, which was entirely imported from the West in the past, and of ball bearings. During the summer of 1948 AVIRT purchased ball bearings in Switzerland through a Hungarian intermediary Gozon PICKLER, who is not otherwise identified

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* Comment: Throughout this report source has used the following designations of coal sizes which are widely used throughout Europe. The numbers designate the minimum and maximum diameters in millimeters of any particular grade.

Powder coal	0-5 mm
Pea coal	0-20 mm
Powderless	
pea coal	5-20 mm
Nut coal	20-40 mm
"Kocka" or	
square coal	40-80 mm
Lump coal	80 mm and above
"Akna" coal	is unsorted or shaft coal

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** Comment: Source was unable to provide a term more readily translatable into English to describe the "ahydration" process. As he has explained it, ahydration is the removal of part of the water content of lignite by subjecting it to treatment with overheated or "dry" steam. The process is related to, but is not identical with, systems of dehydration.

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*** Comment: This probably refers to the Wellhouse or Zinc-tannin process.

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*** Comment: Central Directorate for Heavy Industry.